

ABSTRACT

Method and apparatus for estimating of Multi-Input Multi-Output (MIMO) wireless channels. The estimating (training) sequences are designed, transmitted and processed in such a way that the channel response is estimated for each transmitter, even if transmitters send training sequences at all discrete multitone frequencies simultaneously, and that the negative effects of phase noise and frequency offset on channel estimation are minimized. The proposed sequences are optimal or near-optimal from the viewpoint of mean-squared error in channel estimation for a given energy and duration of the training signal. Within above described scope, several approaches to and designs of channel estimator are proposed.

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